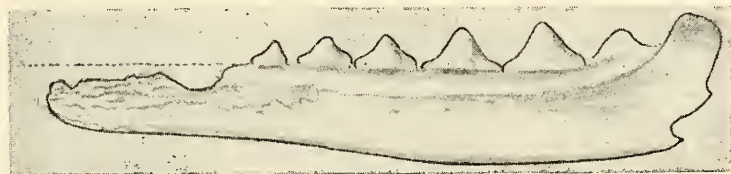


ON A NEW SOUTH AFRICAN TRIASSIC RHYNCHO-
CEPHALIAN.

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In the collection of Mr. Alfred Brown, of Aliwal North, there is an imperfect lower jaw of a small reptile which is of considerable interest. The fragment represents the greater portion of the left dentary with six acrodont teeth of a slender lizard-like form which strikingly recalls the Jurassic *Homæosaurus*. As there are, even in

DENTARY OF PALACRODON BROWNI. $\times 3\frac{1}{2}$.

the fragment preserved, one or two characters distinctly different from those of *Homæosaurus*, and as it is unlikely that the genus which is at present only known from the Kimmeridge occurred as early as the Trias, I propose to regard the African form as a member of a new genus and call it—

PALACRODON BROWNI, n.g. et sp.

The dentary as preserved measures 19 mm., and it is unlikely that when perfect it measured more than 20 mm. In front it is very slender and though the teeth are lost it is probable that no part of the anterior third measured more than 2 mm. in depth. The first tooth preserved is situated 5.2 mm. behind the anterior part of the jaw. It is of very small size, measuring about .8 mm. in length and about .7 mm. in height. In this and the other teeth there is a sort of rudimentary cingulum at the base of the tooth, and the whole tooth stands out pretty markedly from the surface of the jaw. The first five teeth preserved increase steadily in size from before

backwards, and the apices of the four following the first are situated at the following distances from the apex of the first—1·4, 2·9, 4·9, and 7 mm. respectively. The fourth tooth measures 2 mm. in length and 1·2 mm. in height; the fifth is 2 mm. in length and 1·5 mm. in height. Below the fourth and fifth teeth the jaw becomes much deeper than elsewhere, measuring 3 mm. Behind the fifth tooth is a smaller sixth tooth which is not very satisfactorily displayed but which is distinctly acrodont, showing that the jaw is probably that of an adult animal. Along the jaw, at a distance of 1 mm. from the base of the teeth, runs a low, longitudinal ridge probably for the attachment of the lip. At the posterior part of the specimen, the dentary passes upwards and curves very markedly inwards. There is no part of a coronoid bone preserved. From the shape of the back part of the dentary it seems probable that the planes of the two jaws sloped markedly inwards.

It is impossible from so small a fragment to say much of the animal, but it was evidently a form about half the size of *Sphenodon* and with much more slender jaws.

The deposit from which the specimen was obtained is a bone bed containing many fragments of bones and teeth, and it is possible that Mr. Brown's industry may yet be rewarded by other fragments which can be recognised as belonging to *Palacrodon*.

The specimen is of interest as being the earliest known true Rhynchocephalian. The Order Rhynchocephalia, which was formed for the reception of reptiles allied to *Sphenodon*, has been held by many to include the primitive types such as *Palæohatteria*, *Rhynchosaurus*, *Hyperodapedon*, and a number of others. By other authors it is held that if the order is expanded sufficiently to include the early types with plate-like pelvis, it becomes exceedingly difficult to define it and much confusion is likely to arise in forming the limits of the group. Following most American authorities I consider it advisable to restrict the group to those forms with two temporal arches and radiating pelvis—the *Rhynchocephalia vera* of others. This restricted group has hitherto not been known earlier than the Jurassic, but it might have been inferred to have originated in the Triassic. Our rich South African Triassic deposits will probably yield other types that will throw light on the origin of the group.